Oklahoma Law Enforcement Retirement System Market Update and Portfolio Review

December 31, 2022



We are proud to announce that ACG has again been named a Greenwich Associates Quality Leader – recognized as one of the top consultants in the industry.

Methodology and Disclosure: Between July and October 2021, Coalition Greenwich (previously known as Greenwich Associates), conducted in-person and phone interviews and online surveys with 811 professionals at 661 of the largest tax-exempt funds in the United States, including corporate and union funds, public funds, endowments and foundations, insurance general accounts, and healthcare organizations, with either pension or investment pool assets greater than \$150 million. Study participants were asked to provide quantitative and qualitative evaluations of their asset managers and investment consultants, including qualitative assessments of those firms soliciting their business and detailed information on important market trends. ACG is one of four firms recognized in the mid-size investment consultant category. The ratings may not be representative of any one client's experience with ACG; rather they are representative of those clients that chose to participate in the survey. The results are not indicative of ACG's future performance. ACG does not pay to have its clients participate in the study.



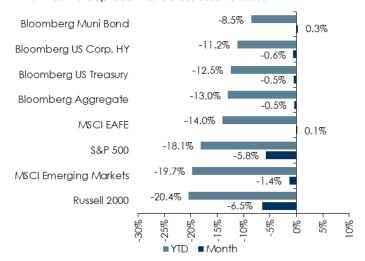
Market Snapshot December 31, 2022

Economic Overview

- The Fed increased rates by another 50 bps, as expected, but with a dot plot indicating a higher terminal rate before an expected pause
- Economic data weakened, with a decline in retail sales and the first contraction in the US manufacturing PMI since the start of the pandemic
- US inflation continued to slow, surprising to the downside, while the labor market remained strong with unemployment holding steady at 3.7%

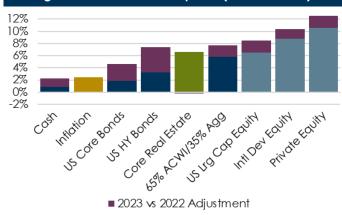
Market Returns

- Muni bonds, non-US dev. equity outperformed in December
- 2022 saw steep declines across asset classes



Source: Bloomberg, ACG Research (as of 12/31/2022)

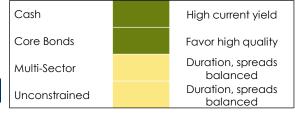
Average Annual Return Assumptions (Next 10 Years)



Asset Class Valuations - Rebalancing Rationale

- Equity valuations improved as prices fell in 2022
- Favor investment grade credit over high yield
- Cash yields remain attractive

Asset Class	Current Valuation	Rationale
US Large Cap		Balanced upside/downside risks
US Small Cap		Balanced upside/downside risks
Intl Developed		Favorable valuations, currency tailwinds
Emerging Mkt		Balanced upside/downside risks



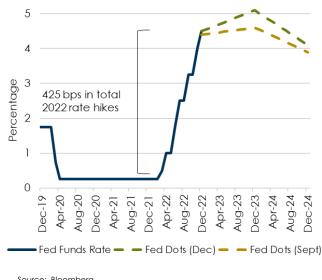




Key Risk Factors We Are Watching

- Inflation and labor market data
- Tightening financial conditions
- Downward revisions to corporate earnings
- Ongoing geopolitical tensions
- Regulatory policy shifts (US and China in particular)

Fed Not Done as 'Dots' Forecast a Higher Peak



Source: Bloomberg

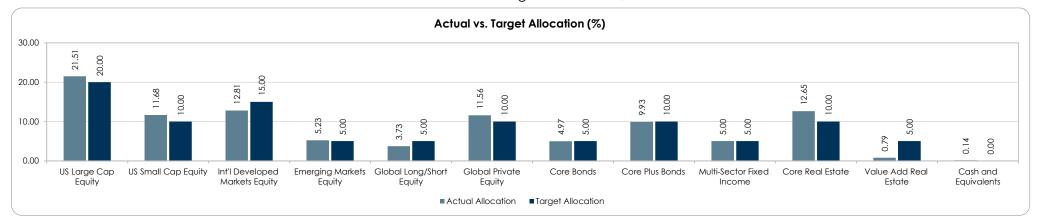
Recent Articles (click on links below)

- China Reopening (January)
- Restoring the Fixed Income Foundation (Dec)
- Mid-Term Elections (October)

Upcoming Articles / Webcasts

Year in Review/Market Outlook (Jan)

For the Periods Ending December 31, 2022



Asset Class	Market Value (\$000s)	Value Allocation Allocation		Range Min - Max (%)		
Total Portfolio	1,047,884	100.00 100.00				
Equity	697,024	66.52 65.00	1.52			
US Large Cap Equity US Small Cap Equity Int'l Developed Markets Equity Emerging Markets Equity Global Long/Short Equity Global Private Equity	225,360 122,359 134,267 54,815 39,035 121,187	21.51 20.00 11.68 10.00 12.81 15.00 5.23 5.00 3.73 5.00 11.56 10.00	1.51 1.68 -2.19 0.23 -1.27 1.56	15.00 25.00 5.00 15.00 10.00 20.00 0.00 10.00 0.00 10.00 5.00 15.00		
Fixed Income	208,449	19.89 20.00	-0.11			
Core Bonds Core Plus Bonds Multi-Sector Fixed Income	52,033 104,022 52,395	4.975.009.9310.005.005.00	-0.03 -0.07 0.00	0.00 10.00 5.00 15.00 0.00 10.00		
Real Assets	140,901	13.45 15.00	-1.55			
Core Real Estate Value Add Real Estate	132,598 8,303	12.65 10.00 0.79 5.00	2.65 -4.21	5.00 15.00 0.00 10.00		
Cash and Equivalents	1,510	0.14 0.00	0.14			

For the Periods Ending December 31, 2022

	Dec 2022 Market Value (\$000s)	Nov 2022 Market Value (\$000s)	Actual Allocation (%)	1 Month (%)	3 Months (%)	FYTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	Since Inception (%)
Total Portfolio (01/92)	1,047,884	1,080,253	100.00	-2.59	4.79	0.04	-14.08	3.69	4.63	6.81	7.46
Policy Index	1			-3.42	5.53	0.56	-13.75	3.66	5.01	7.12	7.64
US Large Cap Equity (04/10) S&P 50	225,360	244,323	21.51	-5.81 -5.76	8.16 <i>7.5</i> 6	2.03 2.31	-20.31 -18.11	6.82 7.66	9.08 9.42	12.80 12.56	12.00 11.96
US Small Cap Equity (11/09) Russell 200	122,359	133,970	11.68	-6.54 -6.49	7.65 6.23	5.65 3.91	-20.26 -20.44	5.25 3.10	5.65 4.13	9.56 9.01	11.70 <i>10.53</i>
Non-US Equity (04/94) MSCI ACWI ex U	189,082 JS	190,948	18.04	-0.89 -0.71	13.29 14.37	1.21 3.16	-18.64 -15.57	-0.08 0.53	1.36 <i>1.</i> 36	4.45 4.28	5.45 5.27
Global Long/Short Equity (04/10) MSCI ACN HFRI FOF: Strateg		39,542	3.73	-1.28 -3.90 0.30	3.87 9.88 3.10	3.43 2.51 1.13	-17.54 -17.96 -11.49	-2.54 4.49 2.52	-0.01 5.75 2.14	3.98 8.54 3.42	3.83 8.12 2.91
Global Private Equity (12/01) *	121,187	117,215	11.56	0.08	-0.13	-2.26	-3.13	18.01	14.46	12.05	6.26
Fixed Income (10/90) Bloomberg US Aggrega	208,449	209,137	19.89	-0.33 -0.45	2.00 1.87	-2.56 -2.97	-13.22 -13.01	-3.39 -2.71	-0.76 0.02	0.87 1.06	5.90 5.10
Real Assets (06/99) Real Assets Blended Index	140,901	143,604	13.45	-1.84 -5.13	-3.89 -5.13	-4.33 -4.84	6.13 6.59	8.68 8.98	6.72 6.55	7.24 6.42	7.22 6.47
Cash and Equivalents (06/11)	1,510	1,515	0.14	0.34	0.93	1.56	1.83	0.89	1.45	0.98	0.90

Fiscal YTD is June 30.

^{*} Performance is reported net of fees.

¹ Policy Index: Effective October 2019, the index consists of 35.00% S&P 500, 10.00% Russell 2000, 15.00% MSCI ACWI ex US, 30.00% Bloomberg US Aggregate, 10.00% NFI ODCE Net.

² Real Assets Blended Index: Effective October 2019, the index consists of 100.0% NFI ODCE Net.

For the Periods Ending December 31, 2022

	Dec 2022 Market Value (\$000s)	Nov 2022 Market Value (\$000s)	Actual Allocation (%)	1 Month (%)	3 Months (%)	FYTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	Since Inception (%)
Equity											
US Large Cap Equity											
Hotchkis and Wiley (30 bp) (05/90)	70,276	79,221	6.71	-5.06	17.13	8.86	-3.81	8.31	7.51	12.11	10.59
Russell 1000 Value	•			-4.03	12.42	6.11	-7.54	5.96	6.67	10.29	9.79
NT S&P 500 Index Fund (1 bp) (08/08)	93,882	99,623	8.96	-5.76	7.56	2.31	-18.10	7.69	9.44	12.57	10.23
S&P 500				-5.76	7.56	2.31	-18.11	7.66	9.42	12.56	10.21
Polen (50 bp) (01/19)	61,203	65,479	5.84	-6.53	-0.12	-5.34	-37.52	1.57			9.85
Russell 1000 Growth)			-7.66	2.20	-1.48	-29.14	7.79	10.96	14.10	14.32
US Small Cap Equity											
Kennedy Capital (89 bp) (07/93)	61,021	68,344	5.82	-6.54	10.64	8.18	-12.16	9.62	6.59	11.10	12.33
Russell 2000 Value	•	00,011	0.02	-6.56	8.42	3.42	-14.48	4.70	4.13	8.48	9.37
Wellington (80 bp) (09/16)	61,338	65,626	5.85	-6.53	4.70	3.43	-28.07	0.31	4.15		7.66
Russell 2000 Growth	•			-6.42	4.13	4.38	-26.36	0.65	3.51	9.20	6.89
International Developed Markets Equity											
Mondrian International (52 bp) (01/05)	70,204	70,263	6.70	0.03	16.86	0.29	-10.52	-1.21	0.46	4.41	4.42
MSCI EAFI		•		0.11	17.40	6.49	-14.01	1.34	2.03	5.16	4.66
MSCI EAFE Value	<u>,</u>			1.31	19.73	7.61	-4.95	1.26	0.79	4.10	3.84
Barings Focused EAFE Plus Equity (40 bp) (02/12)	64,063	63,860	6.11	0.42	17.01	5.43	-15.82	0.07	1.35	4.89	4.86
MSCI ACWI ex U.	5			-0.71	14.37	3.16	-15.57	0.53	1.36	4.28	4.82
Emerging Markets Equity											
William Blair EM Leaders (76 bp) (10/16)	39,410	40,512	3.76	-2.72	5.65	-2.94	-25.19	-3.05	-0.20		4.40
MSCI Emerging Market	3			-1.35	9.79	-2.74	-19.74	-2.34	-1.03	1.81	3.70
Wasatch Advisors (110 bp) (07/12)	15,406	16,312	1.47	-5.45	4.26	-0.35	-38.72	4.56	4.48	4.70	5.72
MSCI EM SC	•			-0.96	8.33	2.89	-17.54	5.60	1.49	3.59	4.73
Long/Short Equity											
Grosvenor (80 bp) (02/08)	306	304	0.03	0.52	-3.21	-6.33	-10.12	1.17	2.26	5.15	3.44
MSCI ACW	I			-3.90	9.88	2.51	-17.96	4.49	5.75	8.54	6.03
HFRI FOF: Strategic				0.30	3.10	1.13	-11.49	2.52	2.14	3.42	1.73
K2 Ascent (27 bp) (08/20)	38,729	39,238	3.70	-1.30	3.93	3.51	-17.63				-1.99
MSCI ACW				-3.90	9.88	2.51	-17.96	4.49	5.75	8.54	6.03
HFRI FOF: Strategic	:			0.30	3.10	1.13	-11.49	2.52	2.14	3.42	2.83
Private Equity (12/01) *	121,187	117,215	11.56	0.08	-0.13	-2.26	-3.13	18.01	14.46	12.05	6.26

^{*} Performance is reported net of fees.

For the Periods Ending December 31, 2022

	Dec 2022 Market Value (\$000s)	Nov 2022 Market Value (\$000s)	Actual Allocation (%)	1 Month (%)	3 Months (%)	FYTD (%)	1 Year (%)	3 Years (%)	5 Years (%)	10 Years (%)	Since Inception (%)
Fixed Income											
Core Bonds NT Aggregate Index Fund (2 bp) (04/04) Bloomberg US Aggregate	52,033	52,288	4.97	-0.48 -0.45	1.87 1.87	-2.88 -2.97	-12.88 -13.01	-2.66 -2.71	0.07 0.02	1.09	2.95 2.94
Core Plus Bonds TCW Asset Management (34 bp) (10/93) Bloomberg US Aggregate	104,022	104,320	9.93	-0.29 -0.45	1.81 1.87	-3.24 -2.97	-13.87 -13.01	-1.89 -2.71	0.85 0.02	1.95 1.06	4.99 4.34
Multi Sector Fixed Income Loomis Sayles (35 bp) (09/21) Bloomberg Gov't/Credit Real Assets	52,395	52,528	5.00	-0.25 -0.48	2.56 1.80	-0.80 -2.84	-12.35 -13.58	 -2.57	 0.21	 1.16	-9.87 -10.96
Real Estate JPM Strategic Property Fund (92 bp) (04/12) NEL ODCE Net	108,894	111,597	10.39	-2.42 -5.13	-4.97 -5.13	- 6.18 -4.84	4.64 6.59	8.68 8.98	7.69 7.73	9.58 9.11	9.78 9.14
UBS Trumbull Property Fund (68 bp) (01/13) NFI ODCE Net Colcord Center (11/07) 3	18,904 4,800	18,904 4,800	1.80 0.46	0.00 -5.13 1.29	0.02 -5.13 1.20	0.02 -4.84 6.15	11.72 6.59 1.93	7.61 8.98 6.76	5.46 7.73 5.80	7.55 9.11 5.89	7.55 9.11 5.45
Value Add Real Estate (02/22)	8,303	8,303	0.79	0.00	-0.76	8.10					19.98
Cash and Equivalents (03/10)	1,510	1,515	0.14	0.34	0.93	1.56	1.83	0.89	1.45	0.98	0.85

³ Performance is based on monthly cash flows and an annual appraisal valuation.

Investment management fee estimates stated after the manager names are calculated based on March 31, 2021 market values and exclude performance based fees.

Global Private Equity

For the Period Ending December 31, 2022

Summary of Cash Flows for 1 Month

Cash Outflows	Cash Inflows	Net Cash Flows
-4,610,429	738,167	-3,872,262

Summary of Portfolio Inception to Date

Summary of Fornoito Inception to Date	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Total	Dec-01	200,185,000	135,782,367	68,378,673	72,340,862	121,187,075	193,527,937	1.43x
AMR I	Dec-01	8,000,000	8,352,692	-	9,400,696	-	9,400,696	1.13x
Knightsbridge VI	Dec-04	10,000,000	9,506,658	493,342	15,170,861	2,196,525	17,367,386	1.83x
AMR / APEP II	Dec-05	10,000,000	10,110,724	18,407	12,616,531	27,721	12,644,252	1.25x
Knightsbridge VII	Aug-08	7,500,000	6,247,505	1,252,495	12,607,622	6,445,105	19,052,727	3.05x
Apollo VIII	Feb-14	10,000,000	10,509,941	1,127,375	11,176,070	3,889,727	15,065,797	1.43x
Warburg Pincus XII	Dec-15	10,000,000	9,865,000	135,000	8,161,697	12,621,265	20,782,962	2.11x
Apollo IX	Mar-19	8,500,000	7,589,230	2,692,672	2,710,546	7,297,652	10,008,198	1.32x
Warburg Pincus Global Growth	Mar-19	40,000,000	35,180,000	4,820,000	290,000	46,728,430	47,018,430	1.34x
FirstMark Capital Opportunity Fund III	Jun-20	5,000,000	5,075,000	-	126,123	5,217,718	5,343,841	1.05x
CVI Credit Value Fund A V LP	Jul-20	15,000,000	9,750,000	5,250,000	-	9,917,608	9,917,608	1.02x
FirstMark Capital Fund V	Jul-20	5,000,000	3,200,000	1,800,000	54,877	4,298,942	4,353,820	1.36x
Oaktree Opportunities Fund XI	Aug-20	15,000,000	7,500,000	7,500,000	25,839	8,863,714	8,889,553	1.19x
Francisco Partners Agility II	Sep-20	4,050,000	1,970,325	2,079,675	-	2,180,797	2,180,797	1.11x
Francisco Partners VI	Jan-21	12,135,000	8,925,292	3,209,708	-	9,569,333	9,569,333	1.07x
Warburg Pincus Global Growth 14	Jun-22	10,000,000	2,000,000	8,000,000	-	1,932,537	1,932,537	0.97x
FirstMark Capital OF IV		5,000,000	-	5,000,000	-	-	-	-
FirstMark Capital VI		5,000,000	-	5,000,000	-	-	-	-
Francisco Partners Agility III		5,000,000	-	5,000,000	-	-	-	-
Francisco Partners VII		15,000,000	-	15,000,000	-	-	-	-

Global Private Equity

For the Period Ending December 31, 2022

Cash Flow Activity for 1 Month

Fund Name	Date	Transaction Type	Cash Outflows	Cash Inflows	Net Cash Flows
Total			-4,610,429	738,167	-3,872,262
Francisco Partners VI	12/13/2022	Capital Call	-1,893,060	-	
Apollo IX	12/15/2022	Capital Call	-467,856	-	
Apollo IX	12/15/2022	Distribution	-	170,784	
Apollo IX	12/15/2022	Recallable Distribution	-	152,787	
Apollo VIII	12/19/2022	Capital Call for Fees	-6,685	-	
Apollo VIII	12/19/2022	Capital Call	-141,756	-	
Apollo VIII	12/19/2022	Interest/Expense Paid	-26,072	-	
Apollo VIII	12/19/2022	Distribution	-	414,597	
CVI Credit Value Fund A V LP	12/19/2022	Capital Call	-750,000	-	
Warburg Pincus Global Growth 14	12/20/2022	Capital Call	-600,000	-	
FirstMark Capital Fund V	12/28/2022	Capital Call	-200,000	-	
FirstMark Capital Opportunity Fund III	12/28/2022	Capital Call	-525,000	-	

Value Add Real Estate

For the Period Ending December 31, 2022

Summary of Cash Flows for 1 Month

Cash Outflows	Cash Inflows	Net Cash Flows

Summary of Portfolio Inception to Date

	Inception		Drawn	Remaining	Distributions	Adjusted		Total Value to
	Date	Committed	to Date	Commitment	to Date	Ending Value	Total Value	Paid-in
Total	Jan-22	69,000,000	7,400,000	61,600,000		8,303,049	8,303,049	1.12x
Starwood Distressed Opp. Fund XII	Jan-22	30,000,000	6,000,000	24,000,000	-	6,903,049	6,903,049	1.15x
Angelo Gordon XI	Oct-22	20,000,000	1,400,000	18,600,000	-	1,400,000	1,400,000	1.00x
Blackstone Real Estate Partners X		19,000,000	-	19,000,000	-	-	-	-

Cash Flow Activity for 1 Month

Fund Name	Date	Transaction Type	Cash Outflows	Cash Inflows	Net Cash Flows
Total					

Market OverviewFor the Periods Ending December 31, 2022

	1 Month	3 Months	FYTD	1 Year	3 Years	5 Years	10 Years
	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Equity Markets - Core							
S&P 500	-5.76	7.56	2.31	-18.11	7.66	9.42	12.56
Russell 1000	-5.81	7.24	2.30	-19.13	7.35	9.13	12.37
Russell Mid Cap	-5.40	9.18	5.43	-17.32	5.88	7.10	10.96
Russell 2000	-6.49	6.23	3.91	-20.44	3.10	4.13	9.01
Equity Markets - Growth							
Russell 1000 Growth	-7.66	2.20	-1.48	-29.14	7.79	10.96	14.10
Russell Mid Cap Growth	-6.00	6.90	6.20	-26.72	3.85	7.64	11.41
Russell 2000 Growth	-6.42	4.13	4.38	-26.36	0.65	3.51	9.20
Equity Markets - Value							
Russell 1000 Value	-4.03	12.42	6.11	-7.54	5.96	6.67	10.29
Russell Mid Cap Value	-5.08	10.45	5.01	-12.03	5.82	5.72	10.11
Russell 2000 Value	-6.56	8.42	3.42	-14.48	4.70	4.13	8.48
International Markets							
MSCI EAFE	0.11	17.40	6.49	-14.01	1.34	2.03	5.16
MSCI ACWI ex US	-0.71	14.37	3.16	-15.57	0.53	1.36	4.28
MSCI World	-4.21	9.89	3.20	-17.73	5.45	6.69	9.44
MSCI Emerging Markets	-1.35	9.79	-2.74	-19.74	-2.34	-1.03	1.81
MSCI EM SC	-0.96	8.33	2.89	-17.54	5.60	1.49	3.59
Fixed Income							
ICE BofA ML 1-3 Yr Treasury	0.20	0.73	-0.84	-3.65	-0.41	0.77	0.67
Bloomberg Intermediate Agg	-0.26	1.72	-2.19	-9.51	-1.93	0.31	1.00
Bloomberg Intermediate G/C	-0.18	1.54	-1.57	-8.23	-1.26	0.73	1.12
Bloomberg US Aggregate	-0.45	1.87	-2.97	-13.01	-2.71	0.02	1.06
Bloomberg Gov't/Credit	-0.48	1.80	-2.84	-13.58	-2.57	0.21	1.16
ICE BofA ML High Yield Master II	-0.76	3.98	3.27	-11.22	-0.23	2.12	3.94
FTSE World Govt Bond	-0.17	3.82	-4.08	-18.26	-5.75	-2.54	-1.22
Bloomberg Multiverse	0.55	4.71	-2.37	-16.01	-4.38	-1.57	-0.28

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